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INFO:

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Chief, SR

Attn:

Chief,

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Long Range Balloon

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Reference:

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1. [ ] is currently shipping the [ ] sample balloon as per reference A.

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2. Crate No. 1, the smaller of the two, will be properly reinforced for secure shipment. It contains the tear drop shaped polyethylene envelope (capacity: 115 cubic meters), with lines, suspension strings and rings.

3. Crate No. 2 contains 8 ballast and working weights mounted on the frame together with the automatic high altitude release mechanism and a rubber bladder as well as a protective polyethylene cap.

4. [ ] instructions for handling the balloon are contained in Attachment A.

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APPROVE:

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30 November 1953

ENCL: One (1) - Attach. A, "Instructions for Handling [ ] Balloons."

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DIST: 2 - SR (w/2 cys Attachs. A)  
 3 - [ ] (w/1 cy. attach. A)  
 1 - [ ] (w/1 cy. Attach. A)

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ATTACHMENT A - [REDACTED]

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## [REDACTED] Instructions for Handling the [REDACTED] Long Range Balloon

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1. During transportation, the crates should be handled carefully and should not be thrown about. 50X1
2. Caution should be exercised in opening the crates so as not to damage the balloon envelope and the accessories. 50X1
3. Do not unroll the balloon directly on the ground. Use a tarpaulin to protect the envelope.
4. When filling the envelope with hydrogen, the following should be borne in mind:
  - a. Avert possible damage to the envelope by the nozzle of the gas hose.
  - b. The envelope can be damaged if the flow of gas is too strong. Do not allow the impact of the gas ~~to~~ flow to strike directly on the envelope.
  - c. When inflating the envelope, make sure that there are no air pockets left. It is advisable to hold the top of the balloon off the ground to allow an even spread of gas.
  - d. As the envelope is filling up with gas, it is important that the part above the first ring (Ref. B, Fig. 1, 4) be filled first, before the part below the ring. Also it is imperative that the tension on the lines (Ref. B, Fig. 1, 2) is even and that these lines do not get entangled.
5. Normally it takes 40 to 50 minutes to fill a balloon and from 42 to 45 cubic meters of hydrogen.
6. While inflating the balloon, the gas hoses should be introduced into the envelope for approximately the whole length of the appendage. At the same time the appendage aperture should be somewhat below the nozzle of the gas hose. The appendage should be securely flattened and not allowed to stretch as the envelope is being inflated.
7. When the frame is suspended with the weights and the automatic altitude release mechanism, use the special round shaped needle, enclosed with the material, to sew the protective cap, in at least 8 places (16 spots would be better). A double thread should be used. Before the suspension of the frame, remove the safety strings which strap each cargo to the horizontal hoop of the frame. While sewing, be careful so as not to sew one of the working lines inadvertently.
8. Before launching, be sure to remove the safety string from the rod of the automatic high altitude release mechanism.
9. Choose a suitable launching site well protected from sudden wind blasts.

NOTE: In case of a long period of storage, the automatic high altitude release mechanism should be checked for correct operation in a vacuum chamber and, if necessary re-adjusted by changing the volume of air contained in the rubber bladder.

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